2123
#2
FOS
MHA

Case **8035M**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of	:	
CHESTER, ET AL.	:	
Serial No.: 09/777,989	:	Group Art Unit: 2123
Filed: 6 February 2001	:	Examiner: unknown
Confirmation No.: 3218	:	

For: Methods for Modeling, Predicting, and Optimizing High Performance Liquid Chromatography Parameters

INFORMATION DISCLOSURE STATEMENT

Commissioner For Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, record is being made below in a Form PTO/SB08 of documents which the Patent Office may wish to consider in connection with examination of the above-identified patent application. It is respectfully requested that the cited documents be carefully considered by the Examiner and made of record in this case. As provided in §1.97(g), no representation is made or intended that a thorough art search was made. As provided in 37 C.F.R. §1.97(h), this Information Disclosure Statement does not constitute an admission of any kind, and specifically is not an admission that the documents listed on attached form PTO/SB08 are, or are considered to be, material to the patentability of the above-identified patent application, as defined in 37 C.F.R. §1.56(b).

1. [] 37 C.F.R. §1.97 (b)(1) - **U.S. Direct (within 3-months of filing a regular application or converted provisional)**

This information disclosure statement, submitted under 37 C.F.R. §1.97 (b)(1), is being filed within three months of the filing date of a national application. Therefore, no fee is believed to be due.

2. [] 37 C.F.R. §1.97 (b)(2) - **Via PCT (within 3 mo. of Nat'l Stage Entry)**

This information disclosure statement, submitted under 37 C.F.R. §1.97 (b)(2), is being filed within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application. Therefore, no fee is believed to be due.

3. [X] 37 C.F.R. §1.97 (b)(3) - **(>3 mo. after filing direct or nat'l stage entry, but before 1st O.A.)**

This information disclosure statement is being submitted under 37 C.F.R. §1.97 (b)(3). Applicants have not received an Office Action on the merits in the present application. Therefore, no fee is believed to be due. However, in the event that this paper is crossing in the mail with a first Office Action on the merits, authorization is hereby given to charge the required fee pursuant to 37 C.F.R. §1.97(c) and 37 C.F.R. §1.17(p) to Deposit Account No. 16-2480 in the name of The Procter & Gamble Company. A duplicate of this letter is enclosed to facilitate charging of the fee, if necessary.

THE FOLLOWING IS ADDITIONAL INFORMATION PERTAINING TO (2) OR (3) MARKED WITH AN (X) ABOVE.

(a) [] The Notification of Acceptance of this Application Under 35 U.S.C. §371 indicates that both a copy of the International Search Report and copies of the references cited therein are present in the national stage file. In accordance with MPEP §1893.03(g), it is respectfully requested that the Examiner note the consideration of these references in the first Office Action via the PTO-892 form.

(b) [] The Notification of Acceptance of this Application Under 35 U.S.C. §371 indicates that a copy of the International Search Report is present in the national stage file. Copies of the references cited in that report are enclosed.

(c) [] The Notification of Acceptance of this Application Under 35 U.S.C. §371 does not indicate that a copy of the International Search Report and copies of the references cited are present in the national stage file. Copies of the International Search Report and references are attached.

4. [] 37 C.F.R. §1.97 (b)(4) - **(before the mailing of a first Office Action after the filing of a request for continued examination under §1.114)**

This information disclosure statement, submitted under 37 C.F.R. §1.97(b)(4), is being filed with the Request for Continued Examination (RCE) under 37 C.F.R. §1.114.

5. [] Information to be Considered with CPA Filing. This information disclosure statement is being filed with a Continued Prosecution Application (CPA) filed under 37 CFR 1.53(d).

6. [] 37 C.F.R. §1.97(c) with fee payment - **(use after 1st Office Action & before Final Office Action or Notice of Allowance)**

This information disclosure statement is being submitted under 37 C.F.R. §1.97(c). Applicant(s) have not received a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311, or an action that otherwise closes prosecution in the application (e.g., *Ex parte Quayle)* as of the date of this submission. Applicant(s) elect to pay the fee set forth in 37 C.F.R. §1.17(p). Please charge the fee set forth in 37 C.F.R. §1.17(p) to Deposit Account Number 16-2480 in the name of The Procter & Gamble Company. A duplicate copy of this letter is enclosed to facilitate the charging of the fee.

ADDITIONAL ITEMS TO BE NOTED BY THE EXAMINER:

[] (1) Copies of the cited references were previously cited by or submitted to the USPTO in prior application Case No. ____, U.S. Patent Application Serial No. __, filed __. Applicants claim priority to said application under 35 U.S.C. §120. Accordingly, copies of those documents are not provided with this Statement, pursuant to 37 C.F.R. §1.98(d).

OR

[X] (2) Copies of the cited documents are enclosed.

OR

[] (3) Copies of all said documents, except document No.'s _____, were submitted and considered in parent application U.S. Patent Application Serial No. _____, filed _____. Applicant(s) claim priority to said application under 35 U.S.C. §120. Accordingly, copies of document No.'s _____ are not provided with this Statement, pursuant to 37 C.F.R. §1.98(d). Copies of document No.'s _____ are enclosed. It is respectfully requested that the cited documents be carefully considered by the Examiner and made of record in this case.

[] (4) Pursuant to 37 C.F.R. §1.98(c), a concise explanation of the relevance of each cited reference that is not in the English language is provided.

[] (5) Applicants also respectfully request the Examiner to consider and make of record the copending applications listed on the attached page.

[] Additional information is attached.

Respectfully submitted,

By _____

Catherine U. Brown
Attorney for Applicants
Registration No. 44,565
(513) 627-1637

20 July 2001
Miami Valley Laboratories
P.O. Box 538707
Cincinnati, Ohio 45253-8707
(Last Revised 5/3/01)

Please type a plus sign (+) inside this box → [+]

PTO/SB/08A (08-00)
Approved for use through 10/31/2002 OMB 0651-0031
Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

SHEET 1 of 5

COMPLETE IF KNOWN	
Application Number	09/777,989
Confirmation Number	3218
Filing Date	6 February 2001
First Named Inventor	Chester
Group Art Unit	2123
Examiner Name	unknown
Attorney Docket Number	8035M

U. S. PATENT DOCUMENTS

EXAMINER INITIALS*	Cite No.[1]	U.S. PATENT DOCUMENT Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS*	Cite No.[1]	FOREIGN PATENT DOCUMENT Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T[6]

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

EXAMINER INITIALS*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[6]
	1	R.D. SMITH, E.G. CHAPMAN, AND B.W. WRIGHT, "Pressure Programming in Supercritical Fluid Chromatography," Analytical Chemistry, 57: (14) pp. 2829-2836 (1985)	
	2	H. SNIJDERS, H.G. JANSSEN, AND C. CRAMERS, "Optimization of termperature-programmed gas chromatographic separations. 1. Prediction of retention times and peak widths from retention indices," Journal of Chromatography A, 718: (2) pp. 339-355 (Dec. 22, 1995)	
	3	J.C. GIDDINGS, Unified Separation Science, John Wiley & Sons, Inc. New York (1991)	
	4	R.G. WOLCOTT, J.W. DOLAN, AND L.R. SNYDER, "Computer simulation for the convenient optimization of isocratic reversed-phase liquid chromatographic separations by varying temperature and mobile phase strength," Journal of Chromatography A, 869, pp. 3-25 (2000)	
	5	L.R. SNYDER, J.W. DOLAN, AND J.R. GRANT, J. Chromatogr., 165, (1979) 3	
	6	P.J. SCHOENMAKERS, "Optimization of Chromatographic Selectivity, a Guide to Method Development," J. Chromatography Library, 35 (1986)	
	7	H. MARTENS AND T. NAES, Multivariate Calibration, ISBN 0-471-90979-3, John Wiley & Sons, Ltd., Chichester (1989)	
	8	R. PERSON, Special Edition Using Excel for Windows 95, QUE, Ch. 29, pp. 838-853	

	9	E. J. BILLO, Excel for Chemists: A Comprehensive Guide, Wiley-VCH, New York, Ch. 17, pp. 287-300 (1997)	
	10	E. BLATTNER ET AL., Special Edition Using Microsoft Excel 2000, QUE, Ch. 22, pp. 646-659 (1998)	
	11	L.R. SNIDER, J.J. KIRKLAND, J.L. GLAJCH, Practical HPLC Method Development, 2nd ed., Wiley, p. 392-394 and pp. 439-478 (1997)	
	12	ATWOOD AND GOLAY, J. Chromatogr., 218, pp. 97-122 (1981)	
	13	J.J. VAN DEEMTER, F.J. ZUIDERWEG, AND KLINKENBERG, Chem. Eng. Sci., 5, 271, (1956)	
	14	C. HORVATH AND H.J. LIN, J. Chromatogr. Sci., 149, 43, (1978)	
	15	G.J. KENNEDY, AND J.H. KNOX, J. Chromatogr. Sci., 10, 149, (1972)	
	16	B.F. KARGER, L.R. SNYDER, AND C. HORVATH, An Introduction to Separation Science, John Wiley & Sons, New York, P. 90 (1973)	
	17	P.E. KAVANAGH, "Optimizing Reversed Phase Separations with the Aid of a Spreadsheet," Chromatographia, Vol. 50, No. 1/2, July, 1999, pp. 65-69 ISSN: 0009-5893	
	18	L. PAUGAM, R. MENARD, J. LAURE, D. THOUVENOT, "Optimization of glucosinolate separation by micellar electrokinetic capillary chromatography using a Doehlert's experimental design," J. Chromatography A, 864 (1999) 155-162	
	19	E. MARENGO, M.C. GENNARO, V. GIANOTTI, E. PRENESTI, "Optimization of the separation of mono- and dichloroanilines in ion interaction high performance liquid chromatography," J. Chromatography A, 863, (1999) 1-11	
	20	A.I. LIAPIS, J.J. MEYERS, O.K. CROSSER, "Modeling and simulation of the dynamic behavior of monoliths Effects of pore structure from pore network model analysis and comparison with columns packed with porous spherical particles," J. Chromatography A, 865 (1999) 13-25	
	21	G. DESMET, G.V. BARON, "Simultaneous optimization of the analysis time and the concentration detectability in open tubular liquid chromatography," J. Chromatography A, 867 (2000) 23-43	
	22	S. GOGA-REMONT, S. HEINISCH, J.L. ROCCA, "Use of optimization software to determine rugged analysis conditiions in high-performance liquid chromatography," J. Chromatography A, 868 (2000) 13-29	
	23	R. BERGES, V. SANZ-NEBOT, J. BARBOSA, "Modelling retention in liquid chromatography as a function of solvent composition and pH of the mobile phase," J. Chromatography A, 869 (2000) 27-39	
	24	C. BARBAS, A. GARCIA, L. SAAVEDRA, M. CASTRO, "Optimization and validation of a method for the determination of caffeine, 8-chlorotheophylline and diphenhydramine by isocratic high-performance liquid chromatography Stress test for stability evaluation," J. Chromatography A, 870, (2000) 97-103	
	25	R. ROMERO, D. GAZQUEZ, M.G. BAGUR, M. SANCHEZ-VINAS, "Optimization of chromatographic parameters for the determination of biogenic amines in wines by reversed-phase high-performance liquid chromatography," J. Chromatography A, 871 (2000) 75-83	
	26	V. NATARAJAN, B. W. BEQUETTE, S. M. CRAMER, "Optimization of ion-exchange displacement separations I. Validation of an iterative scheme and its use as a methods development tool," J. Chromatography A, 876 (2000) 51-62	
	27	V. NATARAJAN, S.M. CRAMER, "Optimization of ion-exchange displacement separations II. Comparison of displacement separations on various ion-exchange resins," J. Chromatography A, 876 (2000) 63-73	
	28	V. PIETTE, M. LAMMERHOFER, K. BISCHOFF, W. LINDNER, "High-performance liquid chromatographic enantioseparation of N-protected alpha amino acids using nonporous silica modified by a quinine carbamate as chiral stationary phase," Lab of Analytical Chemistry, University of Namur, Namur, Belg. Chriality (1997), 9(2), 157-161 ISSN: 0899-0042	
	29	N. HAMADA, H. MURAKITA, T. FUJITA, "Computer application for the optimization of resolution in HPLC," Kuromatogurafi, (1995) 16(4), 278-9 ISSN: 0917-3048	
	30	J.D. STUART, D.D. LISI, L.R. SNYDER, "Separation of Mixtures of o-phthalaldehyde-derivatized amino acids by reversed-phase gradient elution. Accuracy of computer simulation for predicting retention and band width," J. Chromatogr., (1989) 485, 657-72 ISSN: 0021-9673	
	31	J.W. DOLAN, ET AL., "Simultaneous variation of temperature and gradient steepness for reversed-phase high-performance liquid chromatography method development I. Application to 14 different samples using computer simulation," J. Chromatogr. A, (1998) 803(1 + 2), 1-31 ISSN: 0021-9673	
	32	M. LAEMMERHOFER, ET AL., "Computerized optimization of the high-performance liquid chromatographic enantioseparation of a mixture of 4-dinitrophenyl amino acids on a quinine carbamate-type chiral stationary phase using DRYLAB," J. Chromatogr. B: Biometd. Appl. (1997) 689(1), 123-135 ISSN: 0378-4347	
	33	T.H. DZIDO, A. SORY, "Computer optimzation for RP-HPLC separation of some nucleosides," Chem. Anal. (Warsaw) (1996), 41(1), 113-120 ISSN:0009-2223	
	34	R. DAEPPEN, I. MOLNAR, "Application of the gradient elution technique: demonstration with a special test mixture and the DryLab G/plus method development software," J. Chromatogr. (1992), 592(1-2), 133-141 ISSN: 0021-9673	

	35	R.C. TROUPEK, J.S. HANCOCK, L.R. SNYDER, "Computer simulation as a tool for the rapid optimization of high-performance liqid chromatographic separation of a tryptic digest of human growth hormone," J. Chromatogr. (1992), 594(1-2), 65-73 ISSN: 0021-9673
	36	P.A. RYAN, B.A. EWELS, J.L. GLAJCH, "Separation and detection of oxidation products in Neurolite raw material," J. Chromatogr. (1991), 550(1-2), 549-558 ISSN: 0021-9673
	37	T.H. DZIDO, E. SOCZEWINSKI, J. GUDEJ, "Computer aided optimization of high-performance liquid chromatographic analysis of flavonoids from some species of the genus Althaea," J. Chromatogr. (1991) 550(1-2), 71-6 ISSN: 0021-9673
	38	J. FULPER, "Practical approach for high-performance liquid chromatographic method development: assaying synthetic intermediates of a leukotrinene inhibitor," J. Chromatogr. (1989), 485, 597-605 ISSN: 0021-9673
	39	P.B. BOWMAN, ET AL., "Liquid chromatography solvent optimization: potential pitfalls when using a black box for developing a quality separation," J. Pharm. Biomed. Anal., (1993), 11(11-12), 1295-1301 ISSN: 0731-7085
	40	R. FAULSTICH, T. CATALANO, "Interactive computer optimization of high performance liquid chromatography separations in pharmaceutical analysis," LC-GC, (1991), 9(11), 776, 778-779 ISSN: 0888-9090
	41	P.B. BOWMAN, ET AL., "Automated HPLC optimization-not all systems are the same," J. Pharm. Biomed. Anal. (1993), 11(11-12), 1303-15 ISSN: 0731-7085
	42	K. OUTINEN, V.M. LEHTOLA, H. VUORELA, "Behavior of resolution by changing solvent strength and selectivity in the 'PRISMA' model using reversed-phase HPLC for biogenic amines," J. Pharm. Biomed. Anal. (1997), 15(6), 819-829 ISSN: 0731-7085
	43	K. OUTINEN, ET AL., "Optimization of selectivity in high-performance liquid chromatography using desirability functions and mixture designs according to prisma," Eur. J. Pharm. Sci. (1998), 6(3), 197-205 ISSN: 0928-0987
	44	K. OUTINEN, H. VUORELA, R. HILTUNEN, "The retention behavior of biogenic amines in the 'PRISMA' model using reversed-phase HPLC," Acta Pharm. Fenn. (1992), 101(1), 11-20 ISSN: 0356-3456
	45	S. NYIREDY, W. WOSNICK, H. THIELE, O. STICHER, "'PRISMA' model for computer-aided HPLC mobile phase optimization based on an automatic peak identification approach," J. Liq. Chromatogr. (1991), 14(16-17), 3077-3110 ISSN: 0148-3919
	46	C. GEIGER, H. RIMPLER, "'OPTISOLVE' – a PC-program for solvent optimization in liquid chromatography. Part 1," GIT Fachz. Lab. (1990), 34(11), 1391-2, 1395-7 ISSN: 0016-3538
	47	S.J. ZIEGLER, O. STICHER, "Optimization of the mobile phase for HPLC separation of S-alk(en)yl-L-cysteine derivataives and their corresponding sulfoxide isomers," J. Liq. Chromatogr. (1989), 12(1-2), 199-220 ISSN: 0148-3919
	48	R. CELA, ET AL., "PREOPT-W: off-line optimization of binary gradient separations in HPLC by simulation – IV. Phase 3," Comput. Chem. (1996), 20(3), 315-330 ISSN: 0097-8485
	49	R. CELA, M. LORES, "PREOPT-W: a simulation program for off-line optimization of binary gradient separations in HPLC – II. Data management and miscellaneous aspects of use," Comput. Chem. (1996), 20(2), 193-202 ISSN: 0097-8485
	50	R. CELA, ET AL., "The PREOPT package for pre-optimization of gradient elutions in high-performance liquid chromatography," Anal. Chim. Acta (1986), 191, 283-297 ISSN: 0003-2670
	51	R. CELA, M. LORES, "PREOPT-W: a simulation program for off-line optimization of binary gradient separations in HPLC – I. Fundamentals and overview," Comput. Chem. (1996), 20(2), 175-91 ISSN: 0097-8485
	52	S.D. PATTERSON, "Use of solvent selectivity optimization procedures for high-performance liquid chromatographic method development," J. Chromatogr. (1992), 592(1-2), 43-9 ISSN: 0021-9673
	53	M. SOLFRIZZO, ET AL., "Separation of chlamydosporol epimers by reversed-phase HPLC using commercial solvent optimization software," Chromatographia, (1994) 39(7/8), 443-7 ISSN: 0009-5893
	54	G. D'AGOSTINO, ET AL., "Optimization of the mobile phase composition in gradient elution reversed-phase HPLC by stochastic prediction," Chromatographia, (1988) 25(4), 343-9 ISSN: 0009-5893
	55	K. LEMR, "Computerized optimization of the mobile phase in RP-HPLC," Chem. Listy (1992), 86(11), 850-4 ISSN: 0009-2770
	56	P. JAGELAND, ET AL., "Optimization of industrial-scale high-performance liquid chromatography applications using a newly developed software," J. Chromatogr. (1994), 658(2), 497-504 ISSN: 0021-9673
	57	C. BRYANT, ET AL., "Using inductive logic programming to discover knowledge hidden in chemical data," Chemom. Intell. Lab. Syst. (1997), 36(2), 111-123 ISSN: 0169-7439
	58	S. HEINISCH, ET AL., "Computerized optimization of RP-HPLC separation with nonaqueous or partially aqueous mobile phases," Chromatographia, (1997), 44 (9/10), 529-537 ISSN: 0009-5893
	59	B. BOURGUIGNON, ET AL., "CRISEBOOK, a Hypermedia version of an expert system for the selection of optimization criteria in high-performance liquid chromatography," J. Chromatogr. (1992), 592(1-2), 51-7 ISSN: 0021-9673

	60	J. MARTINEZ-MADRID, ET AL., "A new sequential procedure for the efficient and automated location of optimum conditions in high performance liquid chromatography (HPLC)," J. Liq. Chromatogr., (1995), 18(15), 2969-85 ISSN: 0148-3919	
	61	C.T. MANT, ET AL., "Reversed-phase chromatographic method development for peptide separations using the computer simulation program ProDigest-LC," J. Chromatogr., (1989), 485, 365-82 ISSN: 0021-9673	
	62	R.S. HODGES, ET AL., "Computer simulation of high-performance liquid chromatographic separations of peptide and protein digests for development of size-exclusion, ion-exchange, and reversed-phase chromatographic methods," J. Chromatogr., (1988), 458, 147-67 ISSN: 0021-9673	
	63	S.G. LISSETER, "A PASCAL program for the optimization of ternary mobile phases for reversed-phase high performance liquid chromatography," Lab. Microcomput. (1990), 9(4), 109-15 ISSN: 0262-2955	
	64	J. WEI, J. WEI, X. ZHOU, "Computer-aided optimization of the experimental conditions for the isocratic reversed-phase high-performance liquid chromatographic separation of hormonal steroids," J. Chromatogr. (1991), 552(1-2), 103-11 ISSN: 0021-9673	
	65	J. WEI, J. WEI, X. ZHOU, "Optimization of an isocratic reversed phase liquid chromatographic system for the separation of fourteen steroids using factorial design and computer simulation," Biomed. Chromatogr. (1990), 4(1), 34-8 ISSN: 0269-3879	
	66	A.G. WRIGHT, A.F. FELL, J.C. BERRIDGE, "Computer-aided optimization with photodiode array detection in HPLC," Anal. Proc. (London) (1988), 25(9), 300-3 ISSN: 0144-557X	
	67	T. O'DWYER, P. DELAND, R. SMITH, "Optimization of HPLC separations through distributed intelligence using a PC," Am. Lab. (Fairfield, Conn.) (1988), 20(6), 40, 42-4, 46-8, ISSN: 0044-7749	
	68	A.G. WRIGHT, A.F. FELL, J.C. BERRIDGE, "Sequential simplex optimization and multichannel detection in HPLC: application to method development," Chromatographia, (1987), 24, 533-40, ISSN: 0009-5893	
	69	R. ANDERSSON, M.D. HAEMAELAEINEN, "Simplex focusing of retention times and latent variable projections of chromatographic profiles," Chemom. Intell. Lab. Syst. (1994), 22(1), 49-61 ISSN: 0169-7439	
	70	A.G. WRIGHT, A.F. FELL, J.C. BERRIDGE, "Strategies for automated optimization of high-performance liquid chromatographic separations incorporating diode-array detection," J. Chromatogr. (1988), 458, 335-53 ISSN: 0021-9673	
	71	O. BUSTO, J.C. OLUCHA, F. BORRULL, "Determination of phenolic compounds in water by HPLC by linear gradient. An optimized method.," Chromatographia, (1991), 32(9-10), 423-8 ISSN: 0009-5893	
	72	R.P. TUCKER, ET AL., "Computer-aided models for optimization of eluent parameters in chiral liquid chromatography," Chirality, (1992) 4(5), 316-22 ISSN: 0899-0042	
	73	H. J. METTING, P. M. COENEGRACHT, M. J. PIERRE, "Neural networks in high-performance liquid chromatography optimization: response surface modeling," J. Chromatogr. A, (1996), 728(1 + 2), 47-53 ISSN: 0021-9673	
	74	E.P. LANKMAYR, ET AL., "Computer-aided optimization of high-performance liquid chromatography in the pharmaceutical industry," J. Chromatogr. (1989), 485, 183-93 ISSN: 0021-9673	
	75	C. P. ONG, ET AL., "Use of overlapping resolution mapping scheme for optimization of the high-performance liquid chromatographic separation of pharmaceuticals," J. Chromatogr. A, (1995), 692(1 + 2), 207-12	
	76	G. FAN, ET AL., "Optimization of reversed-phase liquid chromatographic separation of aromatic acids," Sepu (1988), 6(4), 220-2	
	77	O.A. QUATTROCCHI, L. IMPERIALE, "Optimization of HPLC methods," SAFYBI (1991), 31(84), 37-60 ISSN: 0558-1265	
	78	W. YUAN, ET AL., "An automatic optimization procedure in multistage gradient elution," Sepu (1985), 2(6), 335-8	
	79	C. ZHOU, ET AL., "Optimization of the composition of a binary mobile phase in RP-HPLC by computer statistical mapping procedure," Fenxi Ceshi Tongbao (1990), 9(2), 52-6 ISSN: 1000-3800	
	80	D. BYLUND, ET AL., "Optimization of chromatographic separations by use of a chromatographic response function, empirical modeling, and multivariate analysis," Chromatographia, (1997), 44(1/2), 74-80 ISSN: 0009-5893	
	81	H. MO, B. DENG, "Optimization of separation conditions for mixtures of phenols by high-performance liquid chromatography using artificial neural network," Fenxi Huaxue (1995), 23(7), 779-82 ISSN: 0253-3820	
	82	R. LYNCH, ET AL., "Solvent optimization system for HPLC applications," LaborPraxis (1990), 14(12), 1028, 1030-2 ISSN: 0344-1733	
	83	F. GONG, ET AL., "An improved algorithm of sequential number-theoretic optimization (SNTO) based on clustering technique," Chemom. Intell. Lab. Syst. (1999), 45(1,2), 339-346 ISSN: 0169-7439	
	84	P. CHAMINADE, ET AL., "Use of the cubic spline interpolation algorithm for the selection of optimal ternary mobile phase composition in RP-HPLC," Analusis (1994) 22(2), 55-7 ISSN: 0365-4877	
	85	B. BOURGUIGNON, ET AL., "Optimization in irregularly shaped regions: pH and solvent strength in reversed-phase high-performance liquid chromatography separations," Anal. Chem. (1994), 66(6), 893-904 ISSN: 0003-2700	

	86	P.F. DE AGUIAR, ET AL., "Comparison of models and designs for optimization of the pH and solvent strength in HPLC," Anal. Chim. Acta, (1997) 356(1), 7-18 ISSN: 0003-2670	
	87	C. GERTZ, W. FELLMANN, "Simple procedure for optimizing multicomponent mobile phases in high-performance liquid chromatography," Fresenius' Z. Anal. Chem. (1986) 323(4), 343-9 ISSN: 0016-1152	
	88	Q. WANG, R. GAO, B. YAN, "Integration of computer-assisted statistical scanning optimization system in HPLC," Chin. J. Chem. (1996), 14(1) 40-7 ISSN: 1001-604X	
	89	B.A. OLSEN, M.D. ARGENTINE, "HPLC method development for duloxetine hydrochloride using a combination of computer-based solvent strength optimization and solvent selectivity mixture design," J. Liq. Chromatogr. Relat. Technol. (1996), 19(12), 1993-2007 ISSN: 1082-6076	
	90	Y. BABA, "Computer-assisted retention prediction for high performance liquid chromatography in the in-exchange mode," J. Chromatogr. (1989), 485, 143-68 ISSN: 0021-9673	
	91	R. CELA, J.A. MARTINEZ, "Off-line optimization in HPLC separations," Quim. Anal. (Barcelona) (1999), 18(1), 29-40 ISSN: 0212-0569	
	92	S. HATRIK, ET AL., "Use of a threshold criterion in the computer-assisted optimization of chromatographic separations," J. Chromatogr. A, (1994), 665(1), 9-15	
	93	P. JANDERA, "Optimization of gradient elution in normal-phase high-performance liquid chromatography," J. Chromatogr. A (1998), 797(1 + 2), 11-22 ISSN: 0021-9673	
	94	S.D. WEST, "The prediction of reversed-phase HPLC retention indexes and resolution as a function of solvent strength and selectivity," J. Chromatogr. Sci. (1987), 25(3), 122-9 ISSN: 0021-9665	
	95	P. LU, H. HONGXIN, "An intelligent search method for HPLC optimization," J. Chromatogr. Sci., (1989), 27(12), 690-7 ISSN: 0021-9665	
	96	R. KYSILKA, M. WURST, "Optimized determination of indole derivatives by high-performance liquid chromatography with selective detection," J. Chromatogr., (1988), 446, 315-21, ISSN: 0021-9673	
	97	B. LIN, W. LIU, P. LU, D.L. MASSART, M. DESMET, B. KOPPENHOEFER, "The simulation and optimization of gradient elution HPLC," Sci. China, Ser. B (1992), 35(9), 1056-66 ISSN: 1001-652X	
	98	M.A. STADALIUS, H.S. GOLD, L.R. SNYDER, "Optimization model for the gradient elution separation of peptide mixtures by reversed-phase high-performance liqid chromatography. Verification of band width relationships for acetonitrile-water mobile phases," J. Chromatogr. (1985), 327, 27-45 ISSN: 0021-9673	
	99	Y. BABA, ET AL., "Effect of column temperature on high-performance liquid chromatographic behavior of inorganic polyphosphates. II. Gradient ion-exchange chromatography," J. Chromatogr. (1985), 350(1), 119-25 ISSN: 0021-9673	
	100	H. ZOU, Y. ZHANG, P. LU, "The prediction of peak width at half height in HPLC," Chin. J. Chem. (1991), 9(3), 237-44	
	101	N. LUNDELL, "Implementation and use of gradient predictions for optimization of reversed-phase liquid chromatography of peptides. Practical considerations," J. Chromatogr. (1993), 639(2), 97-115 ISSN: 0021-9673	
	102	M. KAISER, "HPLC optimization of the separation of explosives and propellant components with an octadecyl phase by computer simulation," Propellants, Explos., Pyrotech. (1997), 22(6), 321-325 ISSN: 0721-3115	

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, D.C. 20231.